68. What aspects of broadband policy have improved consumer welfare, promoted competition, and led to technological innovation? Are there negative aspects of broadband that should be considered when assessing consumer welfare? How can these aspects be minimized while maximizing the potential benefits?

69. We seek comment on the interplay between consumer welfare and the market generally. Where does market competition for broadband customers fall short of providing sufficient consumer safeguards and where must the government step in to ensure that consumers are being properly protected? How can the government maximize the efficiency of its consumer protection regulations? We also seek comment on how the Commission and other agencies should evaluate consumer protections for broadband and broadband-enabled services in ongoing reviews,[108] and we seek comment on how the Commission's plan will consider developments in the regulation and classification of broadband services.[109]

2. Civic Participation

70. The Commission is also instructed to formulate "a plan for use of broadband infrastructure and services in advancing . . . civic participation."[110] We seek comment on how to interpret and implement this portion of the Recovery Act. We also seek comment on how the goals of open and accessible government aimed at increasing public awareness and participation in government can be amplified by access to broadband. For example, what are new uses of broadband that would further open government and civic participation? How do new media, including social networking tools, advance civic participation, and are there limitations or concerns associated with such use? There is a constant push towards greater transparency in government, including innovative methods for direct public access to government and participation in decision making. We seek comment on how broadband infrastructure and services can improve citizen access to local and national news, information, dialogue with government and other citizens, transactional efficiency, and participation in governance. What are the positive and negative consequences of such disintermediation?

71. We also seek comment on how broadband infrastructure and services enable amateur content creation and distribution. For example, does access to broadband increase the ability of the average citizen to make her voice heard by the government and other citizens, and if so, how can this be advanced? Similarly, we seek comment on the benefits of video streaming or video conferencing of government meetings to enable participation by those who cannot attend a meeting in person (because of distance, cost, disability, illness, and the like). Are there other applications of broadband technology that can improve civic participation and how can they be encouraged?

3. Public Safety and Homeland Security

72. In the development of a national broadband plan, the Recovery Act requires that the Commission include "a plan for the use of broadband infrastructure and services in advancing . . . public

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[108] *See, e.g., Consumer Protection in the Broadband Era NPRM*, 20 FCC Rcd 14853 (2005).

[109] *See Wireline Broadband Order*, 20 FCC Rcd 14853 (2005); *see also National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 125 S. Ct. 2688 (2005) (*NCTA v. Brand X*), *aff'g Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002) (*Cable Modem Declaratory Ruling and NPRM*); *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53, Declaratory Ruling, 22 FCC Rcd 5901 (2007); *United Power Line Council's Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, WC Docket No. 06-10, Memorandum Opinion and Order, 21 FCC Rcd 13281 (2006) (*BPL Order*).

[110] Recovery Act § 6001(k)(2)(D).

safety and homeland security."[111] We seek comment on how to interpret and implement this directive, including an analysis of existing policies and programs that are on point. We seek comment on how to identify which broadband services are most needed to advance public safety and homeland security. For example, should the Commission focus on broadband high-speed Internet connectivity for public safety and homeland security needs? How should the broadband infrastructure be designed in order to support both the needs of the public for connectivity to the global Internet and the needs of emergency services for connectivity to a restricted, private IP infrastructure? We seek comment on how advancing public safety and homeland security is interrelated with improvements in telehealth and telemedicine delivery through broadband. We also seek comment on how access to broadband capability may promote interoperable wireless-based communications among various public safety agencies and jurisdictions, as well as plans and benchmarks to improve interoperability. Similarly, we seek comment on how access to broadband capability in general and specific broadband services in particular will ensure that broadband-based applications and support systems (over any broadband transport platform) are compatible among different public safety agencies.

73. We seek comment on whether and to what extent the national broadband plan should address means to protect and advance cybersecurity, specifically with respect to those broadband networks critical to the nation's critical infrastructure, financial institutions, public safety and homeland security. If so, what steps should be taken to secure the nation's most vulnerable broadband facilities and data transfers from cyber threats, such as espionage, disruption, and denial of service attacks? Should certain broadband service providers and operators adhere to specific standards or best practices to minimize such threats? Should the Commission adopt a process whereby communications providers can certify their compliance with specific standards and best practices? What agency or organization within the government is best positioned to take the lead inter-agency coordination role for protecting against and responding to cyber security attacks?

74. We seek comment on any special concerns about ensuring physical diversity or redundancy in public safety and critical infrastructure industry networks and how to track and measure these factors. We seek comment on these issues with respect to commercial networks, as used by public safety entities for emergency communications. We also seek comment on strategies for improving network redundancy and hardening network assets.

75. We seek comment on how developments in broadband technologies and broadband-enabled services impact public safety and homeland security goals. Specifically, in preparing a national broadband plan, how should the Commission take into account the advent of advanced commercial wireless broadband technologies, such as LTE and WiMAX? Are "off-the-shelf" solutions sufficient? Why or why not? What broadband policies would best promote the deployment of next generation 911 (NG 911) networks, including emergency services IP networks? How might the results of NTIA's obligation under the NET 911 Act to develop an NG 911 migration plan assist with ensuring access to broadband service by public safety answering points (PSAPs) and establishing appropriate benchmarks?[112]

76. We seek comment on how the public safety, homeland security, and health care communities envision using broadband both near-term and in the future. Specifically, what features are most important: live video; data transfer; web access; IP-based voice; security and encryption; mission critical or emergency use; virtual private networks; deployable systems for special events, disasters, and pandemics? What are the costs to public safety entities of obtaining broadband service (whether commercial or self-provisioned), devices, and applications, and what sources of funding are available? Are there opportunities for pooling resources, such as shared infrastructure? What models, such as

[111] Recovery Act § 6001(k)(2)(D).

[112] *See* 47 U.S.C. § 942(d); *see also* New and Emerging Technologies 911 Improvement Act of 2008, Pub. L. No. 110-283, 122 Stat. 2620 (2008).

statewide networks, have been tried and shown successes or limitations? What broadband networks exist or are planned? How are public safety entities currently utilizing or planning to utilize commercial broadband networks to carry out their missions? Are such networks used for "mission critical" communications? Are there accommodations that commercial carriers have made for public safety users, such as increased geographic coverage, back-up power or hardening of facilities against weather or terrorist events, enhanced security, or enterprise customer discounts? At what cost? What limitations are public safety entities encountering with respect to commercial broadband networks, and what needs are going unmet by commercial offerings? We seek comment on how to achieve economies of network resource sharing by public safety, where there is "a dedicated broadband network that connects health care providers in a state or region."[113]

77. The Commission has previously found that wireless broadband services will play an essential role in the ability of public safety entities, especially first responders, to fulfill their mission to protect the health, welfare and property of the public.[114] What role should existing fixed and mobile spectrum allocations, which are able to support public safety broadband deployments, have in the development of a national broadband plan? Specifically, how can the 4.9 GHz band meet the broadband needs of the public safety community? In developing the national broadband plan, what is the interplay with our current rulemaking addressing public safety services in the 700 MHz band? For example, in a separate proceeding, the Commission is seeking comment on how to promote the development of a nationwide, interoperable broadband network for the nation's first responders.[115] What additional steps should the Commission take with regard to other spectrum bands available for public safety use, such as the 4.9 GHz band, in order to help meet the broadband needs of the public safety community? What special considerations, concerns or limitations should be taken into account specifically with respect to public safety broadband deployments in rural areas?

78. In the instant proceeding, we seek comment on what part, if any, the development of an interoperable public safety broadband network should play in the overall plan for the use of broadband infrastructure and services in advancing public safety and homeland security. We seek comment on whether there are programs at other agencies that should be considered as a part of the national broadband plan. We also seek comment on what lessons the Commission can incorporate from its existing policy

[113] *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 21 FCC Rcd 11111, para. 3 (2006) (*2006 Rural Healthcare Pilot Program Order*) ("Under this pilot program, all public and non-profit health care providers may apply for funding to construct a dedicated broadband network that connects health care providers in a state or region.").

[114] *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule*, WT Docket Nos. 06-150, 01-309, 03-264, 06-169, 96-86, 07-166, CC Docket No. 94- 102, PS Docket No. 06-229, Second Report and Order, 22 FCC Rcd 15289, 15407-08, para. 325 (2007) (*Second Report and Order*).

[115] *See Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, WT Docket No. 06-150, PS Docket No. 06-229, Second Further Notice of Proposed Rulemaking, 23 FCC Rcd 8047 (2008) (*Second Further Notice*); *Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, WT Docket No. 06-150, PS Docket No. 06-229, Third Further Notice of Proposed Rulemaking, 23 FCC Rcd 14301 (2008) (*Third Further Notice*).

roles impacting public safety and homeland security.[116] Finally, we seek comment on how plans and efforts to advance public safety and homeland security should be coordinated between and among the various federal, tribal, state, and local entities.

79. The prospect of a pandemic outbreak or act of bioterrorism raises the potential for radically shifting network traffic patterns. A likely result of a pandemic or bioterrorism threat is a large surge in citizens telecommuting from their homes or other locations rather than from their typical work sites. Could such a shift in broadband use from the workplace to the home trigger significant congestion and delays in the flow of data over broadband networks, particularly at the enterprise and residential Internet access levels? Should a plan for access to broadband capability address this possibility, and if so, how? For example, in such an event, would traffic prioritization schemes be necessary to maintain the flow of data essential to the nation's economy, public health, and defense? We seek comment on whether the national broadband plan should include a prioritization scheme to account for pandemic and bioterrorism threats. If so, which agencies should have the authority and responsibility for setting priorities, and how should these priorities be established and enforced? For example, should traffic be prioritized by traffic type, by destination, or by some other qualifier?

4. Community Development

80. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . community development."[117] We seek comment on the interpretation and implementation of this portion of the Act. While one of the benefits of broadband is the ability to connect more efficiently with the global community, we seek comment on how it could be used for developing local communities. For example, how could a local community use broadband Internet access to identify local problems and enhance methods for solving those problems? Does or can broadband be used to help develop local resources, assess the needs of the local community, and foster cooperation and volunteerism on a local level? How can broadband be used as a resource for economic development in communities across America? How could broadband be used to provide communities with local news and information? How can the universal service High-Cost, Low-Income, Rural Health Care, and Schools and Libraries programs be modified to encourage community broadband development? What other local social goals may be impacted positively by broadband, and how could broadband access be used to further those goals?

5. Health Care Delivery

81. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . health care delivery."[118] We seek comment on how to interpret and implement this portion of the Act.

82. Electronic medical records are an important aspect of modernizing our healthcare system and stimulating our economy. Federal agencies are actively working to develop interoperable Health IT

[116] For instance, there are public safety elements of the Rural Health Care Pilot Program in which participants are to coordinate the use of their health care networks with HHS and, in particular, with its Centers for Disease Control and Prevention (CDC) in instances of national, regional, or local public health emergencies (*e.g.*, pandemics, bioterrorism). *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 22 FCC Rcd 20360, 20402-03, paras. 81-82 (2007) (*RHC Pilot Selection Order*). Pilot Program participants must also submit quarterly reports providing detail on how their supported networks have complied with this directive. *Id.* at 20423-24, 20434, paras. 126-29, App. D. Additionally, when there is a natural disaster, the Commission often receives requests for additional funding from the E-rate program for infrastructure that has been destroyed. We seek comment on whether funding from the E-rate program should be used to upgrade – and possibly provide greater broadband access – beyond what insurance will replace.

[117] Recovery Act § 6001(k)(2)(D).

[118] Recovery Act § 6001(k)(2)(D).

standards.[119] We seek comment generally on the interaction between broadband development and improved access to medical records and healthcare. For example, how can broadband infrastructure and services be used to develop more efficient, effective, and secure access to medical records? We also seek comment on ways to advance broadband networks that are consistent with the Health IT standards set by HHS to support and promote the NHIN.

83. Consistent with the Health IT policy goals outlined above, in 2006 the Commission initiated a rural healthcare program supported by universal service funds.[120] The Rural Health Care Pilot Program supports up to 85 percent of eligible costs of designing, installing, operating and maintaining a broadband health care network that is available to eligible healthcare providers.[121] Pilot Program participants are required, where feasible, to use Pilot Program funding in ways to ensure their funded broadband network projects are consistent with HHS's Health IT initiatives in several areas: Health IT standards; certification of electronic health records, personal health records, and networks; the NHIN architecture; the National Resource for Health Information Technology; and the PHIN.[122] Pilot Program participants must also submit quarterly reports providing detail on how their supported networks have complied with the HHS Health IT initiatives.[123]

84. We also seek comment on how improved broadband infrastructure and services can increase the quality of medical care available to unserved and underserved parts of the country through tele-health initiatives. For example, how effective have existing efforts been and how can they be improved? To what extent would potential regulations impede or enhance development of a vibrant

[119] In 2004, President Bush issued an Executive Order calling for the development and implementation of a national interoperable health information technology infrastructure. A key element of the 2004 Executive Order's interoperable health information technology infrastructure plan is the National Health Information Network (NHIN) plan which promotes a "network of networks" where state and regional health information exchanges and other networks that provide health information services work together, through common architecture (services, standards, and requirements), processes and policies to seeurely exchange information. Letter from Robert M. Kolodner, MD, National Coordinator for Health Information Technology, to Chairman Kevin J. Martin, FCC, WC Docket No. 02-60 (dated Aug. 17, 2007). As a result, HHS has worked since 2005 to define standards necessary to assure the interoperability of eleetronie health records.

[120] *2006 Rural Healthcare Pilot Program Order*, 21 FCC Rcd 11111.

[121] *2006 Rural Healthcare Pilot Program Order*, 21 FCC Red 11111; *2007 RHC Pilot Selection Order*, 22 FCC Rcd 20360. In the Rural Health Care Pilot Program, the Commission, in consultation with HHS, addressed ways the Pilot Program and the NHIN can advance the provision of critical patient information to clinicians at the point of care to enable vital links for disaster preparedness and emergeney response, to improve healthcare and population health, and to prevent illness and disease. *2007 RHC Pilot Selection Order*, 22 FCC Rcd at 20402-03, para. 82.

[122] *2007 RHC Pilot Selection Order*, 22 FCC Rcd at 20402-03, para. 82. Participants shall use Pilot Program funding in ways that are consistent with HHS's health information technology (IT) initiatives that "provide leadership for the development and nationwide implementation of an interoperable health information technology infrastructure to improve the quality and efficiency of health eare." Accordingly, where feasible, selected participants, as part of their Pilot Program network build-out projects shall: (1) use Health IT systems and produets that meet interoperability standards recognized by the HHS Secretary; (2) use Health IT products certified by the Certification Commission for Healthcare Information Technology; (3) support the NHIN architecture by coordinating their aetivities with the organizations performing NHIN trial implementations; (4) use resources available at HHS's Agency for Healthcare Research and Quality (AHRQ) National Resource Center for Health Information Technology; (5) edueate themselves concerning the Pandemie and All Hazards Preparedness Act and eoordinate with the HHS Assistant Seeretary for Publie Response as a resource for telehealth inventory and for the implementation of other preparedness and response initiatives; and (6) use resourees available through CDC's Public Health Information Network (PHIN) to facilitatc interoperability with public health organizations and networks. *See id.*

[123] *RHC Pilot Selection Order*, 22 FCC Rcd at 20432-44, App. D. Quarterly reports are due for a 72-month period from the initial due date (July 30, 2008). *See RHC Pilot Selection Order*, 22 FCC Rcd at 20423-24, paras. 126-27.

nationwide tele-health network? What effect would this network have on our economy and jobs? We also seek comment on ways in which Rural Health Care Pilot Program projects are advancing implementation of a national interoperable health information technology infrastructure. In doing so, we seek comment on lessons learned from the pilot and suggestions concerning how the Rural Health Care program can further this initiative.

85. We also seek comment on how we can continue to work with HHS and other agencies to maximize the penetration of tele-health initiatives, educate citizens on broadband and tele-health options, and generally use broadband to increase health awareness, diagnosis, and treatment. Finally, the Recovery Act requires that HHS, in consultation with other government agencies, including the Commission, conduct a study and report on the availability of open source health information technology systems.[124] We seek comment on how to consider the availability of open source health information technology systems with respect to the national broadband plan, which, as stated, includes a plan for use of broadband infrastructure and services in advancing health care delivery.

6. Energy Independence and Efficiency

86. In the development of a national broadband plan, the Recovery Act requires that the Commission include "a plan for the use of broadband infrastructure and services in advancing . . . energy independence and efficiency."[125] We seek comment on how to interpret and implement this directive, including an analysis of existing Commission and other agency policies, programs, and proposals designed to advance the policy goals of the Recovery Act. Federal policy and recent legislation have trended towards implementing more efficient energy distribution mechanisms. Are there broadband applications that could help to improve efficiencies in energy production, distribution or consumption, like smart grid technology?[126] In 2007, Congress set aside $100 million per fiscal year between 2008 and 2012 for developing and implementing smart grid technologies.[127] The Recovery Act provisioned $11 billion for the same goal.[128] We seek comment on how broadband infrastructure and services could help achieve efficient implementation of smart grid technology. Are there other organizations, such as the Department of Energy, with which the Commission should coordinate? We also seek comment on how these aspects of the national broadband plan will affect the economy and the creation of new jobs.

87. How does the potential for more widespread use of teleworking based on access to broadband capability factor into our country's energy independence and efficiency? Would the opportunity for workers to "commute" over a broadband network rather than over roads or other transportation networks have a significant effect on the amount or source of energy that we use on a regional or national level? Is there an energy conservation role for intelligent highways, which may use broadband technologies for such things as traffic control?[129] What standards and programs exist regarding energy efficiency of consumer and commercial electronics for broadband? We also seek comment generally on how broadband technology can be leveraged to make the United States more climate-friendly, and how a national broadband plan can help us achieve this goal.

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[124] Recovery Act § 4103(b); *see* App., para. 4 (deseribing this requirement).

[125] Reeovery Act § 6001(k)(2)(D).

[126] *See, e.g.*, Peter Slevin and Steven Mufson, *Stimulus Dollars Energize Efforts To Smarten Up the Electric Power Grid*, WASH. POST, Mar. 10, 2009, at A1.

[127] Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 at § 1304 (2007) *codified at* 42 U.S.C. § 17384.

[128] Recovery Act Div. A, Title IV.

[129] *See, e.g.*, Charles J. Murray, *Auto Industry Prepares for Intelligent Highway: Automotive experts say nothing comes close to the life-saving potential of the intelligent highway*, DESIGN NEWS, June 2, 2008, *available at*: http://www.designnews.com/article/46149-Auto_Industry_Prepares_for_Intelligent_Highway.php.

7. Education

88. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . education."[130] We seek comment on how to interpret and implement this portion of the Act.

89. It has been said that education is the key to our future economic success. What role can broadband play in boosting the quality of American schools? Can the availability of broadband be used to encourage more technology partnerships between schools and businesses? In what ways does broadband access allow children and adults with disabilities to participate more fully in school and other educational activities? What is the role of this country's libraries in marshaling broadband access to advance education?

90. How can a broadband plan maximize the benefits that our nation can derive from distance learning? Are the potential benefits greater in, and should our attention be focused more on, any particular scholastic level, such as grade school, middle school, high school or college? Should resources be directed more toward institutions or student locations? Does the potential to take online courses and earn a degree from a remote location increase the chances that people will earn a degree? What are the benefits of teaching media literacy to students of all ages so they can better utilize the information they receive?

91. In recent years, broadband access has allowed schools, parents, teachers and students to communicate and share valuable information online. How many parents, teachers and students are missing out on these benefits because of a lack of computers, computer literacy, or access to broadband? What other barriers are there to bringing the benefits of broadband into the classroom, and what can be done about them?

92. The Commission's E-rate program helps schools and libraries obtain affordable telecommunications, Internet access and internal connections by providing discounts on eligible equipment and services.[131] We seek comment on how this program fits into a national broadband plan. Does the Commission need additional data on the broadband needs of schools and libraries or on the services currently being supported in order to best determine how E-rate would fit into a national plan? If so, how should these data be collected?

93. We also seek comment on how we can work with the Department of Education to maximize the positive impact that a national broadband plan would have on the Department of Education's initiatives. In addition, we seek comment on how we can identify existing and planned state initiatives that use broadband to advance education and incorporate these into our preparation of a national broadband plan.

8. Worker Training

94. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . worker training."[132] We seek comment on how to interpret and implement this portion of the Act. For example, how can American workers use broadband to increase their workplace effectiveness, both for training and on a daily basis? How can access to broadband be utilized by citizens; state, local, tribal, and federal governmental agencies; and educational institutions, among others, to enable worker training in preparation for

[130] Recovery Act § 6001(k)(2)(D).

[131] *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, 9002, para. 424 (1997) (*Universal Service First Report and Order*); *see also Release of the Funding Year 2009 Eligible Services List for Schools and Libraries Universal Service Mechanism*, CC Docket No. 02-6, Public Notice, FCC 08-265 (2008).

[132] Recovery Act § 6001(k)(2)(D).

employment, including when workers are laid off, between jobs, or preparing to re-enter the workforce after a number of years? We also seek comment on how we can work with the Department of Labor to maximize the positive impact that a national broadband plan would have on the Department of Labor's initiatives. How could we work with the Department of Labor or other organizations to ensure that the American worker benefits from increased broadband access?

9. Private Sector Investment

95. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . private sector investment."[133] We seek comment on how to interpret and implement this portion of the Act. For example, how can Congress or the Commission encourage private sector investment in broadband technology and services and the services and economic activity that they support? Likewise, how can Congress or the Commission encourage uses of broadband infrastructure and services that stimulate private sector investment in a variety of contexts (*e.g.*, seed programs, technology hubs, unlicensed services)? Some communities have developed their own broadband projects where private sector competition has not yielded sufficient results.[134] We seek comment on the efficacy of encouraging the development of local and municipal broadband projects that compete with private enterprise. Does such public investment discourage or encourage private investment? What can we do to encourage private sector investment in broadband apart from loans and grants?

96. We seek comment on how to accurately measure private sector investment both in and as a result of broadband infrastructure and services. For example, how and from what sources should we obtain these data? Additionally, we seek comment on how to analyze the data we receive.

97. *Research and Development.* As with any other technology-based enterprise, research and development (R&D) play a key role in developing broadband infrastructure and services. Some experts have stated that the United States may have to pay a high economic price in the future for falling out of the lead in these areas.[135] As we contemplate a national broadband plan, we seek comment as to whether the change in financial markets or other global competitive factors are having an impact on the continuing development of cutting edge technologies in the United States. We seek comment on how to move our nation forward in research and development of next-generation technologies. For example, should such an effort include more government-funded research and development? Do we require more basic research? We also seek comment on how this particular economic climate should inform any efforts to stimulate R&D.

10. Entrepreneurial Activity

98. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . entrepreneurial activity."[136] We seek comment on how to interpret and implement this portion of the Act. For example, web-based

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[133] Recovery Act § 6001(k)(2)(D).

[134] For example, a number of municipalities have undertaken projects to bring high-speed broadband to their citizens. *See, e.g.*, Marguerite Reardon, "Lafayette, La., finally gets its fiber network," CNET NEWS, Feb. 6, 2009 *available at* http://news.cnet.com/8301-11386_3-10158583-76.html (Lafayette, Louisiana fiber network); W. David Gardner, "Vermont Municipal Fiber Network Is On The Road To Profitability," INFORMATIONWEEK, Sept. 26, 2007, *available at* http://www.informationweek.com/news/telecom/showArticle.jhtml?articleID=202102007 (Burlington, Vermont fiber network).

[135] *See, e.g.*, Richard J. Newman, *Can America Keep Up?*, U.S. NEWS AND WORLD REPORT, Mar. 27, 2006, *available at* http://www.usnews.com/usnews/biztech/articles/060327/27global.htm (arguing that many of the breakthroughs in technology are no longer happening in America).

[136] Recovery Act § 6001(k)(2)(D).

entrepreneurial ventures abound. We seek comment on how increased access to broadband would either improve existing ventures or create new ones. How does widespread broadband access impact traditional entrepreneurship? Could potential access to widely dispersed resources and workers over a broadband network change the likelihood of success? Could the success rate of small businesses be improved as a result of a national broadband plan?

99. In the 700 MHz auction, the Commission adopted a requirement for licensees in the 700 MHz Upper C Block to provide an open platform for devices and applications, subject to certain conditions, a move that was supported by a coalition of entrepreneurs.[137] We seek comment on whether additional open platform or open network regulations, including expansion of the 700 MHz C Block regulation to other wireless spectrum, would stimulate or harm the development of new and innovative services previously ignored by incumbent carriers and providers. Commenters should include estimates of the positive and negative effects of such regulations on the economy and job creation.

100. We also seek comment on how we can work better with the Small Business Administration to maximize the positive impact that a national broadband plan would have on the Small Business Administration's initiatives.

101. *Diversity in Ownership.* In section 257 of the Communications Act, Congress tasked the Commission to eliminate market entry barriers for entrepreneurs and other small businesses in the provision of services such as broadband information services, and to promote the policies and purposes of the Act favoring, among other things, a diversity of media voices.[138] Further, section 309(j)(3)(B) of the Communications Act requires the Commission to promote various objectives such as "ensuring that new and innovative technologies are accessible to the American people" by disseminating licenses to "members of minority groups and women."[139] We seek comment on how the national broadband plan can incorporate these objectives, particularly participation in the broadband industry by new entrants and small businesses, including minority and women-owned businesses. What are the barriers to entry for such entities, and what are the ways to encourage diversity in the provision of broadband services? We invite commenters to propose mechanisms that they believe would better advance our goals of promoting diversity and new entry in development and deployment of broadband networks.

11. Job Creation and Economic Growth

102. In the development of a national broadband plan, the Recovery Act requires that the Commission include "a plan for the use of broadband infrastructure and services in advancing . . . job creation and economic growth."[140] We seek comment generally on how to interpret and implement this directive, including an analysis of existing Commission and other agency policies, programs, and proposals designed to advance the policy goals of the Recovery Act. For example, how should we evaluate the impact of the Recovery Act grant and loan programs addressing job creation in the process of broadband deployment? Further, how should the Commission consider the role of broadband as an

[137] *Service Rules for the 698-746, 747-762, and 777-792 Bands; Implementing a Nationwide Broadband Interoperable Public Safety Network in the 700MHz Band*, WT Docket No. 06-150, PS Docket No. 06-229, Second Report and Order, 22 FCC Rcd 15289, 15358-74, paras. 184-230 (2007).

[138] 47 U.S.C. § 257(a), (b).

[139] 47 U.S.C. § 309(j)(3)(B) (requiring the Commission to promote various objectives such as "ensuring that new and innovative technologies are accessible to the American people" by disseminating licenses to "members of minority groups and women"). *Turner Broadcasting Sys. v. FCC*, 512 U.S. 622, 663-64 (1994) ("*Turner I*") (quoting *United States v. Midwest Video*, 406 U.S. 649, 668 n.27 (1972) (plurality opinion) and *Associated Press v. United States*, 326 U.S. 1, 20 (1945)) (stating that "it has long been a basic tenet of national communications policy that the widest dissemination of information from diverse and antagonistic sources is essential to the welfare of the public.").

[140] Recovery Act § 6001(k)(2)(D).

enabling infrastructure for the creation of jobs and economic growth? Would the ability to "virtually" assemble a geographically dispersed workforce on a broadband network result in the creation of new jobs and economic growth, as well as creating opportunity for dispersed workers to compete for otherwise existing jobs? Are there particular elements of a broadband network, for example security of communications, that are essential to realizing the job creation potential of a broadband network? Are existing broadband networks and existing technologies, such as video-conferencing, sufficient to enable a dispersed workforce to assemble over a broadband network or will new technologies be required? Toward this end, how should we factor in considerations such as speed when considering the role of broadband in our economic competitiveness globally?

103. We also seek comment on how we can work with the Department of Labor to maximize the positive economic impact a broadband development plan would have on the United States economy and the American worker.

12. Other National Purposes

104. The Recovery Act directs us to include in our national plan a consideration of "other national purposes" that could be advanced by broadband infrastructure and services.[141] We seek comment on how to interpret and implement this portion of the Act. Specifically, we seek comment on other national purposes not mentioned elsewhere in this NOI, their risks and rewards, and how they could be effectuated by national broadband access. For example, in what other ways can broadband infrastructure and services stimulate economic and social development? Additionally, we seek comment on the impact that ensuring access to broadband capability for all Americans will have with respect to America's competitiveness in the global economy. Likewise, as the Commission compares broadband deployment in the United States with multiple communities around the globe, how should we incorporate the lessons we learn into the development of our own national broadband plan?

105. We seek comment on whether a national broadband plan is an appropriate forum for addressing other known risks associated with Internet access.[142] We seek comment on whether the Commission should address traditional malfeasance that has been exacerbated by ubiquitous access to the Internet, like online child predators and cyberbullying. We also seek comment on whether the Commission should address novel issues unique to the Internet, like the potential privacy, economic, homeland security, and other issues associated with cloud computing.

G. Relationship between the Recovery Act and Other Statutory Provisions

106. The Recovery Act tasks the Commission with the development of a national broadband plan, which could include everything from policies the Commission can implement within its other statutory authority to recommendations to Congress regarding proposed policies or programs to be overseen by other governmental or non-governmental entities. Accordingly, we seek comment on how the national broadband plan should account for the variety of previously existing statutory provisions that touch on broadband, and seek comment on where authority may be needed or where resources should be directed as a part of the national broadband plan the Commission will report to Congress. While discussion in this *Inquiry* often details the policies and programs at the Commission, we ask that parties not limit the scope of their comments on the national broadband plan only to programs within the policymaking authority of the Commission.[143]

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[141] Recovery Act § 6001(k)(2)(D).

[142] *See, e.g., Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming*, MB Docket No. 09-26, Notice of Inquiry, FCC 09-14, paras. 37-43 (rel. Mar. 2, 2009) (discussing child online safety, advanced blocking technologies, and other parental empowerment tools related to the Internet).

[143] We ask that parties be specific about the statutory authority for programs and policies whenever possible.

107. We seek comment on how the Commission's development of a national broadband plan under the Recovery Act relates to other statutory provisions. As noted above, the Commission has a variety of policies and statutory directives relating to broadband, both long-standing and recent. For example, the Commission has for many years encouraged broadband deployment and promoted the public interest through policies such as universal service and competition for telephone and video services. Also, several recent Acts of Congress have required the Commission (and other agencies) to collect specific information, evaluate, provide recommendations, or report on broadband deployment. We seek comment on how these existing Commission activities and policies intersect with and can support the Commission's requirement to develop a national broadband plan.

108. We seek comment on the relationship between the Commission's development of a national broadband plan and the requirements Congress set forth in the BDIA. Specifically, through the BDIA, Congress recently amended reporting obligations under section 706.[144] We seek comment on the relationship between the amended section 706 reporting and analysis requirements and the development of a national broadband plan.[145] Will this information be sufficient to support the plan's "evaluation of the status of deployment of broadband service," or is something more required?[146] Similarly, we seek comment regarding how the Commission should integrate the other information collection and analysis required of the Commission in the BDIA.[147] For example, the BDIA tasks the Commission with cataloging "geographical areas that are not served by any provider of advanced telecommunications capability."[148]

109. We also seek comment on how the broadband elements of the 2008 Farm Bill relate to the Commission's development of a national broadband plan.[149] Specifically, the 2008 Farm Bill requires the Commission, in a separate proceeding, to develop "a comprehensive rural broadband strategy," including recommendations to Congress.[150] We seek comment on whether and how the Commission's comprehensive rural broadband strategy should become a part of its development of a national broadband plan. Further, we seek comment on how the Commission's directive under the 2008 Farm Bill to identify and promote a government-wide strategy, including federal, state, regional, and local government agencies, will relate to or can be incorporated into our development of a national broadband plan.

110. We also seek comment on how the Communications Act and other relevant statutory provisions should inform our development of a national broadband plan. For example, in section 230(b) of the Act, Congress describes a national Internet policy. Specifically, Congress states that it is the policy of the United States "to preserve the vibrant and competitive free market that presently exists for the

[144] BDIA § 103.

[145] The Section 706 reporting requirement states, "[t]he Commission shall, within 30 months after the date of enactment of this Act, and annually thereafter, initiate a notice of inquiry concerning the availability of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) and shall complete the inquiry within 180 days after its initiation. In the inquiry, the Commission shall determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. If the Commission's determination is negative, it shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market." 47 U.S.C. § 157 nt (b).

[146] Recovery Act § 6001(k)(2)(C).

[147] *See infra* App., paras. 6-7 (describing the additional reporting called for by the BDIA).

[148] BDIA § 103(a).

[149] *See* 2008 Farm Bill; *see also infra* App., para. 5 & n.18 (describing the 2008 Farm Bill and detailing the statutory requirements for the Commission's recommendations).

[150] *Id.*

Internet"[151] and "to promote the continued development of the Internet."[152] And in section 706(a) of the 1996 Act, Congress charges the Commission with "encourag[ing] the deployment on a reasonable and timely basis of advanced telecommunications capability" – broadband – "to all Americans."[153] We seek comment on how these statutory provisions should inform our development of a national broadband plan. We also seek comment on how to consider the clause in section 706 that requires the Commission to "take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market" should the Commission find deployment of advanced telecommunications capability is not being deployed to all Americans in a reasonable or timely manner.[154]

111. We seek comment on the ways in which section 254 of the Act defines broadband-related terms in the context of universal service and how to relate these definitions and obligations to the development of a national broadband plan. For example, the Commission is tasked with basing its universal service policies on, among other things, a policy that "[c]onsumers in all regions of the Nation . . . should have access to . . . advanced telecommunications and information services."[155] Section 254 of the Act also requires the Commission to "establish competitively neutral rules . . . to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and non-profit elementary and secondary school classrooms, heath care providers, and libraries."[156]

H. Improving Government Performance and Coordination with Stakeholders

112. We ask parties to comment on how a coordinated effort among federal departments and agencies; tribal, state, and local governments; and interested groups and individuals may enable the nation to achieve Congress's goal that all Americans have access to broadband. We seek comment on what specific steps each of these parties should take to ensure that all stakeholders work cooperatively toward that goal. We ask, in particular, that commenters suggest both formal and informal means of coordination, and describe the information and other systems they believe may be needed to make the coordination seamless and effective.

113. *Coordination among Federal Departments, Agencies, and Others.* A number of federal departments and agencies, including RUS, NTIA, and the Commission, have programs aimed at increasing the deployment and use of broadband facilities, and many of these departments and agencies are tasked with substantive broadband-related obligations under the Recovery Act.[157] We seek comment on what specific steps these departments and agencies should take to cooperate with each other.[158] How, in particular, can the heads of broadband-related programs ensure that the programs are consistent with

[151] 47 U.S.C. § 230(b)(2).

[152] 47 U.S.C. § 230(b)(1).

[153] 47 U.S.C. § 157 nt (incorporating section 706 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996)).

[154] 47 U.S.C. § 157 nt (b).

[155] 47 U.S.C. § 254(b)(3). Further, seetion 254(c) specifically requires that "[u]niversal service is an evolving level of telecommunications services . . . taking into account advances in tclecommunications and information technologies and serviees." 47 U.S.C. § 254(c)(1); *see supra* para. 10.

[156] 47 U.S.C. § 254(h)(2).

[157] *See infra* App., paras. 2-4.

[158] *See, e.g.*, Kruger, Lennard G. and Gilroy, Angele A., Broadband Internet Access and the Digital Divide: Federal Assistanee Programs, Congressional Research Service, Report No. RL30719 (Jan. 23, 2009) (tables listing federal programs related to telecommunications development and broadband access).

each other? What should each department and agency do to ensure that its staff has access to expertise and relevant information in other departments and agencies having responsibility for broadband initiatives? What specific steps should broadband program heads take to make staff in other departments and agencies aware of their broadband initiatives and to avoid duplication of efforts? To what extent should interagency coordination include informal staff-to-staff interactions as well as more formal contacts?

114. We note that broadband itself can enhance the level of coordination among, and services provided by, federal, tribal, state, and local governments. For example, the federal government's recovery.gov website provides an interactive map with links to state government websites providing information about how Recovery Act funds are being used in each state.[159] Feedback to the government is easily enabled at the recovery.gov website and many others at the federal, state and local level. What other ways are there that government at all levels can utilize broadband capabilities for coordination and service provision? Are there "best practices" models that we should be aware of while crafting the national broadband plan?

115. *Public/Private Partnerships and Cooperatives.* We recognize that public/private partnerships have historically achieved public goals in innovative ways.[160] We seek comment on ways in which public/private partnerships can collaborate to advance common broadband objectives. Likewise, we seek comment on cooperatives, including their successes and potential to meet the broadband needs of communities around the country. We ask how public/private partnerships should be structured to ensure that objectives are reached in a timely and efficient manner. Would such partnerships be more effective on a federal, state, local, or tribal level? We also seek comment on any past successful broadband public/private partnerships, as well as specific proposals for public/private partnerships in line with the objectives of a national broadband plan.

116. *Information Systems and Websites.* We seek comment on specific steps federal departments and agencies should take to improve their information systems to facilitate sharing of information among different parts of the federal government, with other governmental entities, and with the public. Is there specific technology that can be cost-effectively employed for such sharing? What interim measures should the Commission and other federal departments and agencies take in the short run to improve information sharing regarding broadband initiatives? What steps should the federal government take to develop a long-term system for information sharing among departments and agencies having broadband-related responsibilities?

117. We ask whether there should be a single website that all departments and agencies tasked with implementing broadband initiatives may use to inform members of the public regarding their programs. If so, should this website expand an existing website, such as Grants.gov[161] or cfda.gov,[162] or should a new website be established for this purpose? What specific functionalities should the website

[159] State Recovery Sites, http://www.recovery.gov/?q=content/state-recovery-page (last visited Mar. 18, 2009).

[160] *See, e.g.,* UNITED STATES DEP'T OF TRANS., REPORT TO CONGRESS ON PUBLIC-PRIVATE PARTNERSHIPS (Dec. 2004) (reporting on the benefit of public/private partnerships in highway construction and maintenance), *available at* http://www.fhwa.dot.gov/reports/pppdec2004/.

[161] Grants.gov is a federal governmental website that allows individuals and organizations to find and apply for grants from various federal governmental departments and agencies. *See* Grants.gov, About, http://www.grants.gov/aboutgrants/about_grants_gov.jsp (last visited June 16, 2008).

[162] The Catalog of Federal Domestic Assistance, *available at* www.cfda.gov, provides a full listing of all federal programs available to state and local governments; federally-recognized Indian tribal governments; territories (and possessions) of the United States; domestic public, quasi-public, and private profit and nonprofit organizations and institutions; specialized groups; and individuals.

have on the user side in order to make the user experience as easy as possible? Could one application feasibly address all of a user's needs while meeting other operational requirements?

118. We also seek comment on how the federal government can use web-based systems to coordinate broadband rollout with tribal, state, and local governments and other interested groups and individuals. We ask how these systems may be made accessible to individuals with disabilities. We also ask whether we should develop other systems specifically to assist individuals and organizations that lack broadband access.

119. *Case Workers.* There are a variety of broadband grant and loan initiatives administered by numerous agencies. Some have suggested a benefit stemming from a single point of contact within the government. We ask whether each potential grant or loan applicant should be assigned a case worker to help sort through the various broadband programs to determine which would be the most likely to meet the applicant's needs, and to assist in the application process and provide further guidance in the event the applicant receives a grant or loan. Such a program could be patterned after the program the Army has developed to assist patients at Walter Reed Army Medical Center.[163] We seek specific input regarding the details of how a case worker system would operate in an environment where a single applicant might need to interface with multiple agencies. In particular, should a case worker, in addition to assisting a grant or loan applicant, serve as a central point of contact for federal government staff and other interested parties to obtain information regarding the applicant and the status of each grant or loan for which the applicant has applied? If so, should the case worker have access to confidential information regarding the applicant and be able to share that information with the federal agency personnel responsible for processing a grant or loan application pending in another agency?

120. *Confidential Information.* We ask the parties to address the extent to which federal departments and agencies will obtain confidential information in the course of discharging their broadband-related responsibilities. We invite comment on what confidentiality laws or rules might be implicated by the exchange of information among federal departments and agencies, and between those departments and other governmental entities, non-governmental organizations, and individuals. Should employees at one agency have access to otherwise confidential information held by another agency when that information may be relevant to the first agency's performance of its broadband-related responsibilities? How can the federal government best protect confidential information while complying with the Confidential Information Protection and Statistical Efficiency Act of 2002,[164] the Freedom of Information Act,[165] the Paperwork Reduction Act,[166] and other potentially applicable laws?

121. We also ask what laws and regulations would apply to tribal, state, and local governments and non-governmental entities in the event they receive confidential information in connection with broadband-related initiatives? How can these entities most easily comply with applicable statutes and rules, and what can the government do—beyond its current procedures—to help tribal, state, and local governments and non-governmental entities secure confidential information? Suggestions should account for electronic and interpersonal exchanges, as well as electronic and non-electronic data storage.

122. *Data Sharing.* In creating a national broadband plan, the Commission is given the opportunity to access all of the BDIA data procured by other government agencies in their compliance with the BDIA.[167] We seek comment on the most efficient and effective methods of acquiring these data,

[163] *See* Janet Boivin, R.N., *Update: Nurse's Help Heal Walter Reed*, NURSING SPECTRUM, Apr. 28, 2007, *available at* http://allnurses.com/nursing-activism-healthcare/update-nurses-help-224037.html (last visited June 16, 2008).

[164] Consumer Information Protection and Statistical Efficiency Act of 2002, 44 U.S.C. § 3501 note.

[165] 5 U.S.C. § 552.

[166] *See* Paperwork Reduction Act, 44 U.S.C. § 3510.

[167] Reeovery Act § 6001(l).

and whether there are any complications, such as privacy restrictions, that need to be resolved. We seek submission of studies, surveys, and reports that are relevant to the development of a national broadband plan, and are considering cataloging them for public use. We also seek comment on other potential sources of data to help us measure the nation's progress toward achieving universal broadband availability.

IV. CONCLUSION

123. We recognize the gravity and scope of this forward-looking undertaking, the incredible value of ubiquitous broadband, and the difficulties that lie ahead in ensuring its availability. While bold action may be necessary, we recognize the need to approach an endeavor as vital as a national broadband plan with a spirit of collaboration, transparency, and openness. Accordingly, we seek comment on those issues discussed above, as well as any facts or issues not otherwise addressed in this NOI relating to the adoption or implementation of a national broadband plan.

V. PROCEDURAL MATTERS

A. Paperwork Reduction Act

124. This document does not contain proposed information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified "information collection burden for small business concerns with fewer than 25 employees," pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 47 U.S.C. § 3506(c)(4).

B. Ex Parte Presentations

125. The inquiry this Notice initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[168] Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented generally is required.[169] Other requirements pertaining to oral and written presentations are set forth in section 1.1206(b) of the Commission's rules.[170]

126. It is the intent of the Commission that contacts with the Commission pursuant to this Notice of Inquiry also comply with the March 20, 2009 White House Memorandum for the Heads of Executive Agencies: Ensuring Responsible Spending of Recovery Act Funds ("Memorandum").[171] Under the Memorandum, an executive department or agency official shall not consider the view of a lobbyist registered under the Lobbying Disclosure Act of 1995, 2 U.S.C. § 1601 *et seq.*, concerning particular projects, applications, or applicants for funding under the Recovery Act unless such views are in writing. An executive department or agency official may communicate orally with registered lobbyists concerning general Recovery Act policy issues, provided that such oral communications shall not extend to or touch upon particular projects, applications, or applicants for funding, and further that the official must contemporaneously or immediately thereafter document in writing: (i) the date and time of the contact on policy issues; (ii) the names of the registered lobbyists and the official(s) between or among whom the contact took place; and (iii) a short description of the substance of the communication. This written summary will be posted publicly on the Commission's website within 3 business days of the

[168] 47 C.F.R. §§ 1.200 *et seq.*

[169] *See* 47 C.F.R. § 1.1206(b)(2).

[170] 47 C.F.R. § 1.1206(b).

[171] *See* http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-3-20-09/ (last visited Mar. 24, 2009).

communication. Any registered lobbyists requesting meetings should identify themselves as such at the time of requesting meetings.

C. Comment Filing Procedures

127. Pursuant to sections 1.415 and 1.419 of the Commission's rules,[172] interested parties may file comments and reply comments regarding the Notice on or before the dates indicated on the first page of this document. **All filings related to this Notice of Inquiry should refer to GN Docket No. 09-51.** To improve the Commission's ability to analyze public comments, we request commenters to address specific statutory sections (*e.g.*, section 6001(k)(2)(A)) and to mirror the organization of this Notice of Inquiry where possible. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://www.fcc.gov/cgb/ecfs/ or the Federal eRulemaking Portal: http://www.regulations.gov. Filers should follow the instructions provided on the website for submitting comments.
- ECFS filers must transmit one electronic copy of the comments for GN Docket No. 09-51. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to ecfs@fcc.gov, and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.
- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, 445 12th Street, S.W., Washington, D.C. 20554.
- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail should be addressed to 445 12th Street, S.W., Washington D.C. 20554.
- Parties should send a copy of their filings to the Competition Policy Division, Wireline Competition Bureau, Federal Communications Commission, Room 5-C140, 445 12th Street, S.W., Washington, D.C. 20554, or by e-mail to cpdcopies@fcc.gov. Parties shall also serve one copy with the Commission's copy contractor, Best Copy and Printing, Inc. (BCPI), Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, (202) 488-5300, or via e-mail to fcc@bcpiweb.com.
- Documents in GN Docket No. 09-51 will be available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, 445 12th Street S.W., Room CY-A257, Washington, D.C. 20554. The documents may also be purchased from BCPI, telephone (202) 488-5300, facsimile (202) 488-5563, TTY (202) 488-5562, e-mail fcc@bcpiweb.com.

[172] 47 C.F.R. §§ 1.415, 1.419.

D. Accessible Formats

128. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice) or 202-418-0432 (TTY). Contact the FCC to request reasonable accommodations for filing comments (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov; phone: 202-418-0530 or TTY: 202-418-0432.

VI. ORDERING CLAUSE

129. Accordingly, IT IS ORDERED that, pursuant to the authority contained in sections 4(i), 4(j), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), and 403, and pursuant to the American Recovery and Reinvestment Act of 2009, this Notice of Inquiry IS ADOPTED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX

1. This appendix of background materials contains information on recent federal statutes containing broadband provisions, including the Recovery Act, the 2008 Farm Bill, and the Broadband Data Improvement Act. This appendix also provides a synopsis of the Commission's programs, policies, and other efforts to address broadband, particularly broadband deployment; the synopsis includes activities relating to universal service, spectrum policy, data collection, and regulation and classification.

A. Broadband Legislation

2. The Recovery Act includes support for programs that will accelerate the deployment of broadband infrastructure and services throughout the nation. The Recovery Act also tasks the Commission with developing a national broadband plan by February 17, 2010.[1] By Congress's direction, this plan shall seek to ensure that all people of the United States have access to broadband capability and shall establish benchmarks for meeting that goal.[2] The Recovery Act specifies that the Commission's plan must include an analysis of the most effective and efficient mechanisms for ensuring broadband access by all people of the United States; a detailed strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public; an evaluation of the status of deployment of broadband service, including progress of projects supported by the Recovery Act grants; and a plan for use of broadband infrastructure and services in advancing a broad array of public interest goals.[3]

3. The Recovery Act appropriates $2.5 billion to the Department of Agriculture's Rural Utilities Service (RUS) to support grants, loans, and loan guarantees for broadband infrastructure, targeted specifically at "rural area[s] without sufficient access to high speed broadband service to facilitate rural economic development."[4] The Act also appropriates $4.7 billion to the Department of Commerce's National Telecommunications and Information Administration (NTIA) to "establish a national broadband service development and expansion program" called the "Broadband Technology Opportunities Program" (BTOP).[5] This program will award grants[6] to States, non-profit organizations,

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[1] Recovery Act § 6001(k)(1).

[2] Recovery Act § 6001(k)(2).

[3] *Id.* For a more detailed description of the national broadband plan requirements in the Recovery Act, *see supra* para. 13.

[4] Recovery Act, Division A, Title I, Rural Utilities Service (RUS Appropriations); *see* United States Department of Agriculture, USDA Information Related to the ARRA 2009, http://www.usda.gov/recovery (last visited Mar. 9, 2009).

[5] Recovery Act, Division A, Title II, National Telecommunications and Information Administration (NTIA Appropriations); Recovery Act § 6001. The BTOP has five enumerated purposes in the Recovery Act: "(1) provide access to broadband service to consumers residing in unserved areas of the United States; (2) provide improved access to broadband service to consumers residing in underserved areas of the United States; (3) provide broadband education, awareness, training, access, equipment, and support to [organizations including schools, libraries, healthcare providers, and outreach organizations]; (4) improve access to, and use of, broadband service by public safety agencies; and (5) stimulate the demand for broadband, economic growth, and job creation." Recovery Act § 6001(b). *See also* United States Department of Commerce, Information Related to the American Recovery and Reinvestment Act of 2009, http://www.commerce.gov/Recovery/ (last visited Mar. 9, 2009).

[6] NTIA may award competitive grants to: "(1) acquire equipment, instrumentation, networking capability, hardware and software, digital network technology, and infrastructure for broadband services; (2) construct and deploy broadband service related infrastructure; (3) ensure access to broadband service by community anchor institutions; (4) facilitate access to broadband service by low-income, unemployed, aged, and otherwise vulnerable populations in order to provide educational and employment opportunities to members of such populations; (5) construct and deploy broadband facilities that improve public safety broadband communications services; and (6) undertake such

(continued....)

and broadband providers to fulfill the broadband deployment goals of the Recovery Act.[7] The NTIA must award at least one grant in each state,[8] "consider whether the applicant is a socially and economically disadvantaged small business concern,"[9] and must consider a variety of factors, including the application's net effect on speed, cost and subscribership, as well as improved access for healthcare, education and children.[10] Grantees under this program will also be subject to "non-discrimination and network interconnection" obligations.[11] Further, the Conference Report specifically discusses the Conferees' considerations regarding how NTIA should define broadband services with respect to the broadband grant programs it is charged with administering.[12] Moreover, the Recovery Act and the Conference Report provide instruction regarding the selection of any throughput speed threshold for broadband.[13]

4. The Recovery Act also includes a requirement that the Secretary of the Department of Health and Human Services (HHS) study and report on the availability of open source health information technology (Health IT) systems.[14] The Secretary of HHS is required to consult with the leaders of several agencies, including the Chairman of the Commission, and submit a report by October 1, 2010.[15] Further,

(...continued from previous page)
other projects and activities as the Assistant Secretary finds to be consistent with the purposes for which the program is established." Recovery Act § 6001(g).

[7] Specifically, the Recovery Act states, "To be eligible for a grant under the program, an applicant shall-- (1)(A) be a State or political subdivision thereof, the District of Columbia, a territory or possession of the United States, an Indian tribe (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450(b)) or native Hawaiian organization; (B) a nonprofit-- (i) foundation, (ii) corporation, (iii) institution, or (iv) association; or (C) any other entity, including a broadband service or infrastructure provider, that the Assistant Secretary finds by rule to be in the public interest. In establishing such rule, the Assistant Secretary shall to the extent practicable promote the purposes of this section in a technologically neutral manner." Recovery Act § 6001(e).

[8] Recovery Act § 6001(h)(1).

[9] Recovery Act § 6001(h)(3).

[10] Recovery Act § 6001(h)(2).

[11] Reeovery Act § 6001(j). Seetion 6001(j) of the Recovery Aet states, "Coneurrent with the issuance of the Request for Proposal for grant applieations pursuant to this seetion, the Assistant Seeretary shall, in coordination with the Commission, publish the non-diserimination and network interconneetion obligations that shall be contractual conditions of grants awarded under this section, including, at a minimum, adherence to the principles contained in the Commission's broadband policy statement (FCC 05-15, [sic] adopted August 5, 2005)." *Id.* We understand Congress to mean FCC 05-151, which is the Commission's *Internet Policy Statement*, not FCC 05-15, which is the grant of a San Franciseo radio station license.

[12] The Recovery Act Conference Report states that the final version of the bill "does not define such terms as . . . 'broadband'" and that "[i]n defining 'broadband service,' the Conferees intend that the NTIA take into consideration the technical differences bctwcen wireless and wircline networks, and consider the actual speeds that broadband networks are able to deliver to consumcrs under a variety of conditions." H.R. Conf. Rcp. No. 111-16 at 776 (2009).

[13] With respect to eligibility for grants, the Recovery Act requires NTIA to consider, among other factors, if an application "will, if approvcd, provide the greatcst broadband spced possible to the greatest population of uscrs in the area." Recovery Act § 6001(h)(2)(B). Regarding this provision, the Conference Report states, "[w]hilc the House bill had included spccific speed thresholds that an applicant must have met to be eligible for a grant, the substitute requircs only that the NTIA considcr the speeds that would be dclivercd to consumers in awarding grants. The Conferees arc mindful that a specific spccd threshold could have the unintendcd result of thwarting broadband deployment in certain areas." H.R. Conf. Rep. No. 111-16 at 775 (2009).

[14] Recovery Act § 4104(b)(7)(A).

[15] *Id.*

the Recovery Act requires NTIA to "develop and maintain a comprehensive nationwide inventory map of existing broadband service capability and availability in the United States that depicts the geographic extent to which broadband service capability is deployed and available from a commercial provider or public provider throughout each State."[16] Such a map is required to be made accessible in an interactive and searchable format on the web by February 17, 2011.[17]

5. *Other Recent Legislative Acts Regarding Broadband.* In 2008, Congress passed into law two Acts affecting broadband deployment. First, Congress passed the Food, Conservation, and Energy Act of 2008 ("2008 Farm Bill"), including a provision requiring the Chairman of the Commission to submit to Congress "a comprehensive rural broadband strategy" by May 22, 2009.[18] Specifically, Congress directed that this report include "recommendations" to promote interagency coordination of resources, policies, and initiatives for rural broadband and provide "a description of goals and timeframes to achieve the purposes of the report."[19] On March 10, 2009, the Commission released a public notice seeking comment on the requirements of the 2008 Farm Bill.[20]

6. In October 2008, Congress enacted the Broadband Data Improvement Act (BDIA), which provides for improved federal data on the deployment and adoption of broadband services.[21] The BDIA requires the Commission to publish broadband deployment reports "annually" instead of "regularly" pursuant to section 706 of the Act, and adds several types of data that the Commission must produce and evaluate regarding broadband services.[22] Specifically, the BDIA requires that the Commission's section 706 report identify "unserved" areas, identifying for each such area the population, population density, and average per capita income.[23] Further, the Commission must conduct a consumer survey at least

[16] Recovery Act § 6001(l).

[17] *Id.*

[18] Food, Conservation, and Energy Act of 2008, Pub. L. No. 110-246, 122 Stat. 923 § 6112 (2008 Farm Bill). We note that the 2008 Farm Bill was initially enacted on May 22, 2008. *See* Pub. L. No. 110-234, 122 Stat. 923 (May 22, 2008) (May 22, 2008 Bill). The May 22, 2008 Bill, as enacted, however, did not include one title (*i.e.*, Title III – Trade) that Congress had intended to include. The June 18, 2008 Bill corrected this omission by repealing the May 22, 2008 Bill and enacting a statute that includes Title III but otherwise is identical to the May 22, 2008 Bill. The June 18, 2008 Bill specified that it would take effect on the earlier of the enactment date of that bill or the enactment date of the May 22, 2008 Bill. *See* Pub. L. No. 110-246, § 4(b). Pursuant to this provision, the Act became effective on May 22, 2008, and therefore, May 22, 2009, is the statutory deadline for the comprehensive rural broadband strategy report required by the Act.

[19] 2008 Farm Bill § 2112(a). Specifically, the Commission must provide recommendations "(A) to promote interagency coordination of Federal agencies in regards to policies, procedures, and targeted resources, and to streamline or otherwise improve and streamline the policies, programs, and services; (B) to coordinate existing Federal rural broadband or rural initiatives; (C) to address both short- and long-term needs assessments and solutions for a rapid build-out of rural broadband solutions and application of the recommendations for Federal, State, regional, and local government policymakers; and (D) to identify how specific Federal agency programs and resources can best respond to rural broadband requirements and overcome obstacles that currently impede rural broadband deployment." *Id.*

[20] *Comment Date Established for Report on Rural Broadband Strategy*, GN Docket No. 09-29, Public Notice, DA 09-561 (rel. Mar. 10, 2009).

[21] Broadband Data Improvement Act of 2008, Pub. L. No. 110-385, 122 Stat. 4096 (codified at 47 U.S.C. §§ 1301-1304) (BDIA).

[22] Since 1996, the Commission has initiated and completed five reports to Congress on the status of the availability of advanced telecommunications capability to all Americans, pursuant to Section 706. *See Section 706 Fifth Report*, 23 FCC Rcd at 9616, para. 1. In each case, the Commission has found that such services are being deployed in a reasonable and timely fashion. *Id.*

[23] BDIA § 103(a).

annually that includes questions regarding technology choice, price, speed, applications, consumer decisions and options,[24] and conduct an international comparison of broadband speeds and prices.[25]

7. The BDIA also tasks several other federal agencies with broadband-related responsibilities. For instance, the Commission will assist the Census Bureau with the formulation of a question for the American Community Survey regarding Internet subscription and computer ownership.[26] The Government Accountability Office must submit a report by October 10, 2009 regarding additional metrics for comparing broadband services.[27] Additionally, the Small Business Administration Office of Advocacy is charged with studying and surveying the impact of broadband speed and price on small businesses.[28] NTIA is required to establish a grant program for state-level broadband availability mapping and other broadband related projects, and is required to make available on its website an interactive and searchable nationwide broadband inventory map by February 17, 2011.[29]

B. Ongoing Broadband Efforts of the Commission

8. *Universal Service Programs.* The 1996 Act amended the Act with respect to the provision of universal service.[30] Among other things, section 254(b) directs that there should be specific, predictable, and sufficient federal and state universal service support mechanisms; quality services should be available at just, reasonable, and affordable rates; and access to advanced telecommunications and information services should be provided in all regions of the nation.[31]

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[24] BDIA § 103(c). The Commission recently released a public notice seeking comment on this particular provision of the BDIA. *See Comment Sought on International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act*, GN Docket No. 09-47, Public Notice, DA 09-741 (rel. Mar. 31, 2009).

[25] Specifically, section 103(b) of the BDIA states, "As part of the assessment and report required by section 706 of the Telecommunications Act of 1996 (47 U.S.C. 157 note), the Federal Communications Commission shall include information comparing the extent of broadband service capability (including data transmission speeds and price for broadband service capability) in a total of 75 communities in at least 25 countries abroad for each of the data rate benchmarks for broadband service utilized by the Commission to reflect different speed tiers." BDIA § 103(b)(1). The Commission recently sought comment on these particular provisions of the BDIA. *See Comment Sought on International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act*, GN Docket No. 09-47, Public Notice, DA 09-741 (rel. Mar. 31, 2009).

[26] Specifically, the BDIA states, "The Secretary of Commerce, in consultation with the Federal Communications Commission, shall expand the American Community Survey conducted by the Bureau of the Census to elicit information for residential households, including those located on native lands, to determine whether persons at such households own or use a computer at that address, whether persons at that address subscribe to Internet service and, if so, whether such persons subscribe to dialup or broadband Internet service at that address." BDIA § 103(d).

[27] BDIA § 104.

[28] BDIA § 105.

[29] BDIA § 106; Recovery Act § 6001(l).

[30] 47 U.S.C. § 254.

[31] 47 U.S.C. § 254(b)(1), (2), (5). Specifically, the Act requires that universal service policies be based on the following principles: "(1) QUALITY AND RATES.—Quality services should be available at just, reasonable, and affordable rates. (2) ACCESS TO ADVANCED SERVICES.—Access to advanced telecommunications and information services should be provided in all regions of the Nation. (3) ACCESS IN RURAL AND HIGH COST AREAS.—Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas. (4) EQUITABLE AND NONDISCRIMINATORY CONTRIBUTIONS.— All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the

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9. The Commission has established four programs to implement the universal service goals of the Act. The High-Cost program is designed to ensure that consumers in rural, insular, and high-cost areas have access to telecommunications services at rates that are affordable and reasonably comparable to rates charged for similar services in urban areas.[32] The Low-Income program provides discounts on telephone installation and monthly telephone service to low-income consumers.[33] The Schools and Libraries program (also known as the E-rate program) provides discounts for telecommunications, Internet access, and internal connections for schools and libraries throughout the nation.[34] Finally, the Rural Health Care program provides reduced rates for eligible rural health care providers for telecommunications and Internet services necessary for the provision of health care.[35] In addition to the existing Rural Health Care program, the Commission also established the Rural Health Care Pilot Program to provide, among other things, funding for the construction of state or regional broadband networks and the advanced telecommunications and information services provided over those networks for health care providers.[36] The Pilot Program also will support the advancement of U.S. Department of Health and Human Services (HHS) health information technology (health IT) initiatives for electronic health records and create vital broadband links for disaster preparedness and emergency response to any large-scale emergency or public health crisis.[37]

10. The Act specifies that "[u]niversal service is an evolving level of telecommunications service" that should be revisited periodically.[38] In 2007, the Federal-State Joint Board on Universal Service recommended including broadband service as a supported service under the High-Cost program and proposed permitting States to use various methods to allocate available funds for broadband projects to reach unserved areas, including funding broadband projects through a competitive bidding system designed to select the most efficient provider of such service.[39] In 2008, the Commission released a

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preservation and advancement of universal service. (5) SPECIFIC AND PREDICTABLE SUPPORT MECHANISMS.— There should be specific, predictable and suffieient Federal and State mechanisms to preserve and advance universal service. (6) ACCESS TO ADVANCED TELECOMMUNICATIONS SERVICES FOR SCHOOLS, HEALTH CARE, AND LIBRARIES.—Elementary and secondary schools and classrooms, health care providers, and libraries should have aeeess to advanced telecommunications serviees as described in subsection (h). (7) ADDITIONAL PRINCIPLES.—Such other principles as the [Federal-State Joint Board on Universal Service] and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act. 47 U.S.C. § 254(b).

[32] The program allows eligible carriers who serve these areas to recover some of their operating costs from the federal universal service fund. *See* 47 C.F.R. Part 54, Subpart D.

[33] 47 C.F.R. Part 54, Subpart E.

[34] 47 C.F.R. Part 54, Subpart F.

[35] 47 C.F.R. Part 54, Subpart G.

[36] *See Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 22 FCC Rcd 20360 (2007) (*RHC Pilot Selection Order*); *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 21 FCC Rcd 11111 (2006) (*2006 Rural Healthcare Pilot Program Order*). The Rural Health Carc Pilot Program also supports costs associated with connecting to nationwide backbone providers, Internet2 or National LambdaRail, and connecting to the public Internet. *See RHC Pilot Selection Order*, 22 FCC Rcd at 20361, para. 2.

[37] *See 2006 Rural Healthcare Pilot Program Order*, 21 FCC Rcd 11111.

[38] 47 U.S.C. § 254(c).

[39] *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Recommended Decision, 22 FCC Rcd 20477, 20481-82, 20490-92, paras. 12-15, 55-62 (Fed-State Jt. Bd. 2007). The Commission dcclined to adopt the recommendations of the Joint Board. *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service; Lifeline and Link Up; Universal Service Contribution Methodology; Numbering Resource Optimization; Implementation of the Local Competition*
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Further Notice of Proposed Rulemaking seeking comment on requiring recipients of High-Cost support to offer broadband Internet access service throughout their service areas.[40] In addition, the Commission sought comment on establishing a Broadband Lifeline/Link-Up Pilot Program to examine how the Low-Income universal service support program can be used to enhance access to broadband Internet access services for low-income Americans.[41] Specifically, the Commission sought comment on making available $300 million each year for three years to enable eligible telecommunications carriers to provide discounts on broadband Internet access service and the necessary access devices to low-income consumers.[42]

11. The Commission also has taken a series of steps, through regulatory action, consumer information and tribal outreach, to address the lack of telecommunications deployment and subscribership throughout Indian Country.[43] The Commission has described its trust responsibility toward tribes and expressed its commitment to work cooperatively with other federal departments and agencies, and tribal, state and local governments, to address communications problems, such as low penetration rates and poor service quality on reservations, and other problems of mutual concern.[44]

12. *Increasing the Availability and Use of Spectrum for Broadband Service.* The Commission has made significant wireless spectrum suitable for broadband service available through auction and through other mechanisms. Making spectrum available is a critical step along the path toward making wireless broadband – both mobile and fixed – available to the American consumer. For example, the Commission has auctioned 90 megahertz of Advanced Wireless Service spectrum in the 2 GHz band and 52 megahertz of commercial spectrum in the 700 MHz band.[45] In addition, the Commission has

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Provisions in the Telecommunications Act of 1996; Developing a Unified Intercarrier Compensation Regime; Intercarrier Compensation for ISP-Bound Traffic; IP-Enabled Services, WC Docket Nos. 05-337, 03-109, 06-122, 04-36, CC Doeket Nos. 96-45, 99-200, 96-98, 01-92, 99-68, Order on Remand and Report and Order and Further Notiee of Proposed Rulemaking, FCC 08-262, paras. 30-37 (rel. Nov. 5, 2008) (*November 2008 Further Notice*).

[40] *November 2008 Further Notice* at para. 40, App. A, paras. 19-31, App. C, paras. 19-31.

[41] *See November 2008 Further Notice* at para. 40; App. A, paras. 64-91; App. C, paras. 60-87.

[42] *See id.*

[43] Examples include Tribal Lands Bidding Credits (TLBCs) and the Indian Telecommunications Initiatives (ITI). TLBCs are available to winning bidders for wireless licenses that deploy facilities and provide service to federally-recognized tribal areas that have a wireline telephone subseription or penetration rate equal to or below 85 percent. *See, e.g., Extending Wireless Telecommunications Services to Tribal Lands*, WT Docket No. 99-266, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 11794 (June 30, 2000) (*Tribal Bidding Credits Report and Order*); http://wireless.fec.gov/auctions. ITI is a series of interaetive workshops among Tribal Nations, government ageneies, and industry addressing telecom issues facing Indian Country to encourage partnerships among these groups to improve telecommunications coverage in American Indian and Alaska Native communities. *See, e.g.*, http://www.fcc.gov/indians/.

[44] *See Statement of Policy on* Establishing *a Government-to-Government Relationship with Indian Tribes*, Policy Statement, 16 FCC Rcd 4078 (2000).

[45] *See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Report and Order, 18 FCC Rcd 25162 (2003) (*AWS-1 Service Rules Report and Order*), *modified by Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Order on Reconsideration, 20 FCC Rcd 14058 (2005). *See also Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's* Rules *to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*; *Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones*; *Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services*; *Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules*; *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*; *Development of Operational, Technical and Spectrum Requirements for*
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adopted innovative licensing approaches such as the non-exclusive licensing scheme used in the 3650-3700 MHz band that permits multiple entrants to simultaneously use the band.[46] The Commission also has restructured spectrum use in existing bands with a view to advancing deployment of broadband and advanced services. For instance, in the 2.5 GHz band, the Commission restructured the band plan from interleaved spectrum to more cohesive, contiguous blocks of spectrum, thus allowing for development of mobile broadband services.[47] The Commission has also revised its rules involving unlicensed operations, devices, and equipment authorization to help facilitate the efficient use of spectrum, including allowing unlicensed radio transmitters to operate in the broadcast television spectrum at locations where that spectrum is not being used by licensed services, the so-called TV white spaces.[48]

13. *Broadband Deployment Reporting and Data Collection.* One of the Commission's statutory obligations is to report regularly on "whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion,"[49] which includes broadband Internet access. Since 2000, the Commission has collected information regarding broadband subscribership throughout the United States.[50] The Commission periodically reviews and revises its data collection requirements[51] and in 2008 the Commission revised, for a second time, its methods and procedures for

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Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket Nos. 06-150, 96-86, 03-264, 01-309, 06-169, CC Docket No. 94-102, PS Docket No. 06-229, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8064 (2007); *Second Report and Order*, 22 FCC Rcd 15289 (2007) *recon. pending.*

[46] *Wireless Operations in the 3650-3700 MHz Band; Rules for Wireless Broadband Services in the 3650-3700 MHz Band*, WT Docket No. 05-96; ET Docket No. 04-151, Report and Order, 20 FCC Rcd 6502 (2005), *recon. granted in part, Memorandum Opinion and Order*, 22 FCC Rcd 10421.

[47] *See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, WT Docket No. 03-66, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 14165, 14270, 14271-14272, paras. 281, 286 (2004); *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, WT Docket No. 03-66, Third Memorandum Opinion and Order and Second Report and Order, 21 FCC Rcd 5606 (2006).

[48] *Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, ET Docket Nos. 04-186, 02-380, Second Report and Order, 23 FCC Rcd 16807 (2008) (*White Spaces Second Report and Order*). In addition, the Commission has affirmed its decision to allow unlicensed operation of Access Broadband over Power Line systems, proposed rule changes that would allow longer communications ranges for unlicensed point-to-point broadband digital transmitters to extend the ability of such systems to supply very high-speed broadband service, clarified its rules for operation of unlicensed Wi-Fi and other devices in the 5 GHz band, initiated a proceeding to establish a new service for advanced medical radio communication devices in the 401-406 MHz band, and modified its rules to provide for more efficient equipment authorization of both existing modular transmitter devices and emerging partitioned modular transmitter devices. *Amendment of Part 15 Regarding New Requirements and Measurement Guidelines for Access Broadband over Power Line Systems; Carrier Current Systems, including Broadband over Power Line Systems*, ET Docket Nos. 04-37, 03-104, Memorandum Opinion and Order, 21 FCC Rcd 9308 (2006).

[49] *See* Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 § 706 (1996 Act) (amending the Communications Act of 1934) (reproduced in the notes under 47 U.S.C. § 157).

[50] *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Report and Order, 15 FCC Rcd 7717 (2000) (*2000 Data Gathering Order*). The formal program followed several attempts by the Common Carrier Bureau to collect information on a voluntary basis. *See Local Competition and Broadband Reporting*, CC Docket No. 99-301, Notice of Proposed Rulemaking, 14 FCC Rcd 18106 (1999).

[51] For example, in 2004, the Commission reexamined its Form 477 local competition and broadband data gathering program, and began requiring providers to submit further information about their broadband deployments, including
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collecting information on broadband services.[52] Broadband providers are now required to report the number of broadband connections in service in individual Census Tracts, including speed data for new categories of download and upload speeds in conjunction with subscriber counts.[53] The Commission also collects mobile wireless subscriber counts by state and mobile wireless coverage data by Census Tract.[54] Cable systems also report broadband deployment on Form 325, the annual cable system report, by physical system (PSID). Form 325 is filed, however, by only a sample of systems with fewer than 20,000 subscribers; only large systems file every year.[55] In the *2008 Data Gathering Order*, the Commission also sought comment on a number of additional reporting requirements. Specifically, the Commission sought comment on requiring broadband providers to report actual speed delivered and prices for service, on collaboration with RUS for broadband mapping, and on whether it should periodically conduct and publish opinion surveys of broadband customers.[56]

14. Section 706(c) of the 1996 Act describes advanced telecommunications capability as "high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology."[57] In previous reports to Congress, the Commission defined "broadband" – and, in effect, "advanced telecommunications capability" and "advanced services" – as services and facilities with an upstream (customer-to-provider) and downstream (provider-to-customer) transmission speed of more than 200 kilobits per second (kbps).[58] By contrast, the Commission has used the term "high-speed" to describe

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the percentage of their broadband connections that are faster than 200 kbps in both directions and a categorization of those connections into five "speed tiers" based on the information transfer rate in the connection's faster direction: (1) greater than 200 kbps but less than 2.5 megabits per second (mbps); (2) greater than or equal to 2.5 mbps but less than 10 mbps; (3) greater than or equal to 10 mbps but less than 25 mbps; (4) greater than or equal to 25 mbps but less than 100 mbps; and (5) greater than or equal to 100 mbps. *See Local Telephone Competition and Broadband Reporting*, WC Docket No. 04-141, Report and Order, 19 FCC Rcd 22340, 22347-48, para. 14 (2004) (*2004 Data Gathering Order*).

[52] *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, WC Docket No. 07-38, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691 (2008) (*2008 Data Gathering Order*). The Commission updated the broadband reporting tiers to include upload and download speeds of: (1) greater than 200 kbps but less than 768 kbps; (2) equal to or greater than 768 kbps but less than 1.5 mbps; (3) equal to or greater than 1.5 mbps but less than 3.0 mbps; (4) equal to or greater than 3.0 mbps but less than 6.0 mbps, (5) equal to or greater than 6.0 mbps but less than 10.0 mbps; (6) equal to or greater than 10.0 mbps but less than 25.0 mbps; (7) equal to or greater than 25.0 mbps but less than 100.0 mbps; and (8) equal to or greater than 100 mbps. *Id.* at 9700, para. 20.

[53] *Id.* Previously, the Commission collected data to identify, for each technology (*e.g.*, cable modem, satellite), whether a provider had any subscribers of that service in a postal service 5-digit zip code. The Commission did not collect the actual number of subscribers at the zip code level. *2008 Data Gathering Order*, 23 FCC Rcd at 9695, para. 10. The Commission collects and reports these data semi-annually, with the first reporting deadline for the revised data collection set at March 16, 2009. *See Form 477 Electronic Filing System Now Available; Filing Deadline Extended To March 16, 2009*, WC Docket No. 07-38, Public Notice, DA 09-431 (rel. Feb. 23, 2009).

[54] *2008 Data Gathering Order*, 23 FCC Rcd at 9698, para. 16.

[55] *See* 47 C.F.R. § 76.403 & nt.

[56] *See 2008 Data Gathering Order*, 23 FCC Rcd at 9708-13, paras. 34-40.

[57] 47 U.S.C. § 157 nt.

[58] *Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Report, 14 FCC Rcd 2398, 2406, para. 20 (1999) (*Section 706 First Report*); *Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Second Report, 15 FCC Rcd 20913, 20919-21, para. 10 (2000) (*Section 706 Second Report*); *Deployment of*
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